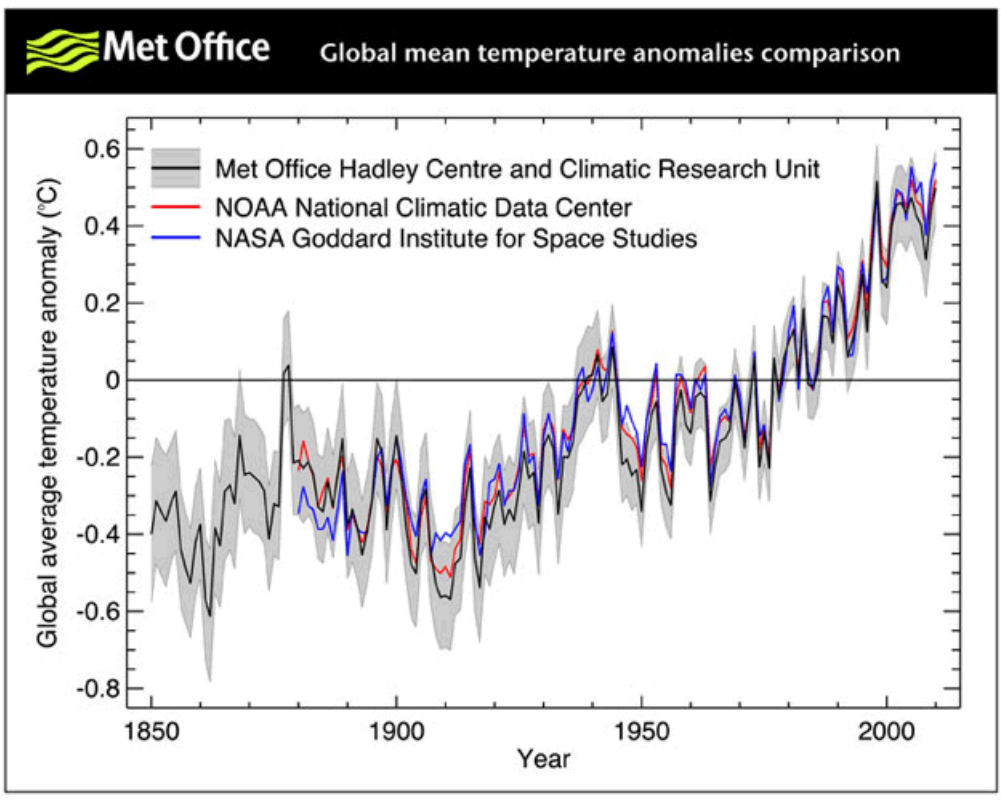
# 2010 — a near-record year

20 January 2011 — The Met Office and the University of East Anglia have today released provisional global temperature figures for 2010, which show the year to be the second warmest on record.

With a mean temperature of 14.50 °C, 2010 becomes the second warmest year on record, after 1998. The record is maintained by the Met Office and the Climatic Research Unit at UEA.

Earlier this month, in the US, NASA's Goddard Institute for Space Studies and NOAA's National Climatic Data Center announced that the past year is either warmest or equal-warmest on their respective records.

Events in the Pacific Ocean have heavily influenced the global temperature in 2010. The year began in El Niño conditions, which have a warming effect. But the El Niño was replaced by a very strong La Niña - the strongest for more than 30 years - which acts to cool the climate.



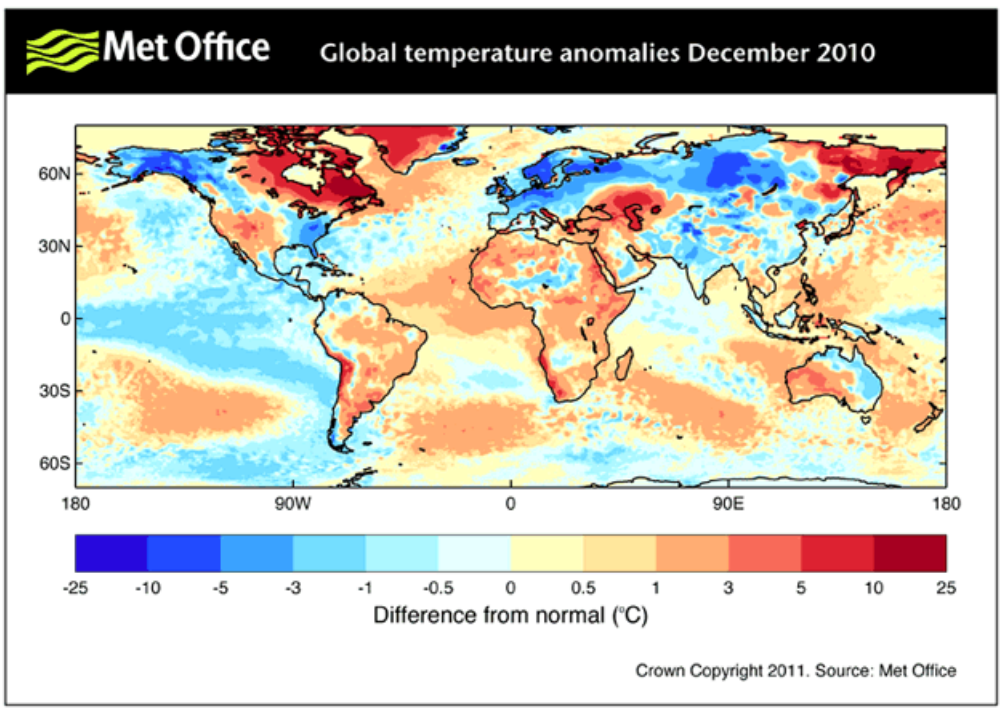

Dr Adam Scaife, head of long range forecasting at the Met Office, said: "The three leading global temperature datasets show that 2010 is clearly warmer than 2009. They also show that 2010 is the warmest or second warmest year on record as suggested in the Met Office's annual forecast of global temperature issued in December 2009."

Speaking about the figures, Professor Phil Jones, Director of Research at the Climatic Research Unit of the University of East Anglia said: "The warmest 10 years in all three datasets are the same and have all occurred since 1998. The last 10 years 2001-2010 were warmer than the previous 10 years (1991-2000) by 0.2 °C."

2010 has been a year of headline-making weather. In the summer there were extremes such as the Russian heatwave and the floods in Pakistan and China. At the end of the year many areas across Northern Europe experienced heavy snowfalls and very low temperatures, while eastern Australia saw extensive flooding.

Professor Julia Slingo investigates the driving forces behind the weather extremes of 2010.

Locally, the UK recorded its coldest year since 1986 and its coldest December on record. However, very few parts of the world were significantly colder than normal during 2010. The Northern Hemisphere experienced its warmest year with a mean temperature anomaly of 0.69 °C.




## Notes

- The 1961-90 global average mean temperature is 14.0 °C.
- Inter-annual variations of global surface temperature are strongly affected by the warming influences of El Niño and the cooling influences of La Niña in the Pacific Ocean. These are quite small when compared to the total global warming since 1900 of about 0.8 °C but, nevertheless, typically reach about +/- 0.10 °C, and can strongly influence individual years.
- Temperature anomaly for the Southern Hemisphere is 0.30 °C, the fifth warmest on the HadCRUT record.
- The table provides the top 10 rankings for all three datasets:

| Rank | HadCRUT3 Year | HadCRUT3 Anomaly * | NOAA NCDC *Year | NOAA NCDC Anomaly * | NASA GISS *Year | NASA GISS Anomaly * |
|---|---|---|---|---|---|---|
| 1 | 1998 | 0.52 | 2010 | 0.52 | 2010 | 0.56 |
| 2 | 2010 | 0.50 | 2005 | 0.52 | 2005 | 0.55 |
| 3 | 2005 | 0.47 | 1998 | 0.50 | 2007 | 0.51 |
| 4 | 2003 | 0.46 | 2003 | 0.49 | 2009 | 0.50 |
| 5 | 2002 | 0.46 | 2002 | 0.48 | 2002 | 0.49 |
| 6 | 2009 | 0.44 | 2006 | 0.46 | 1998 | 0.49 |
| 7 | 2004 | 0.43 | 2009 | 0.46 | 2006 | 0.48 |
| 8 | 2006 | 0.43 | 2007 | 0.45 | 2003 | 0.48 |
| 9 | 2007 | 0.40 | 2004 | 0.45 | 2004 | 0.41 |
| 10 | 2001 | 0.40 | 2001 | 0.42 | 2001 | 0.40 |

* Anomaly: °C above long-term average.

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